

# SYLLABUS

OF THE

## COURSE OF LECTURES

ON THE

## ANATOMY OF THE HUMAN BODY,

DELIVERED BY

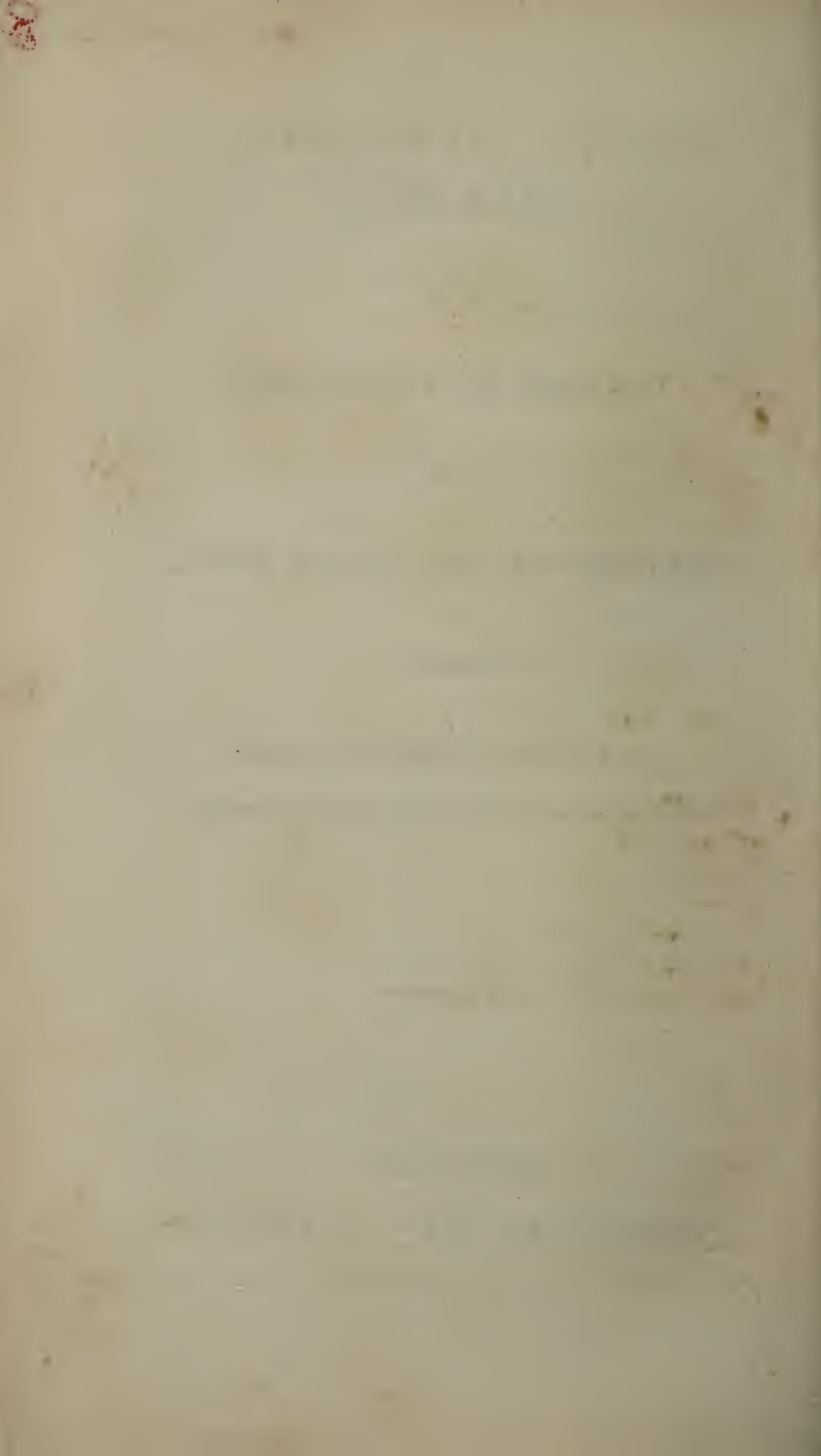
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# GENERAL ARRANGEMENT.

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1. The first part of the paper is devoted to a general discussion of the problem of the origin of life. It is shown that the problem is one of the most important and interesting in the history of science. The author discusses the various theories of the origin of life, and shows that the most probable is the theory of spontaneous generation. This theory is based on the fact that life is everywhere, and that it is impossible to find a place where it does not exist. The author also discusses the question of the origin of the first living organisms, and shows that they must have been very simple in structure. The paper concludes with a discussion of the future of the study of the origin of life.

2. The second part of the paper is devoted to a detailed discussion of the theory of spontaneous generation. It is shown that this theory is based on the fact that life is everywhere, and that it is impossible to find a place where it does not exist. The author discusses the various experiments that have been conducted to test this theory, and shows that they all support it. The paper concludes with a discussion of the future of the study of the origin of life.

3. The third part of the paper is devoted to a detailed discussion of the theory of spontaneous generation. It is shown that this theory is based on the fact that life is everywhere, and that it is impossible to find a place where it does not exist. The author discusses the various experiments that have been conducted to test this theory, and shows that they all support it. The paper concludes with a discussion of the future of the study of the origin of life.

4. The fourth part of the paper is devoted to a detailed discussion of the theory of spontaneous generation. It is shown that this theory is based on the fact that life is everywhere, and that it is impossible to find a place where it does not exist. The author discusses the various experiments that have been conducted to test this theory, and shows that they all support it. The paper concludes with a discussion of the future of the study of the origin of life.



## DIVISION I.

### INTRODUCTION TO THE STUDY OF ANATOMY.

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#### GENERAL VIEW OF THE ORGANIZATION OF THE HUMAN BODY.

Ultimate elements — Proximate principles — Solids —  
Fluids—Cellular tissue—Fibrous tissue.

*Osseous System*—Skeleton in general—*Articulations* —  
Cartilage—Fibro-cartilage— *Muscular system* — *Ner-  
vous system*, and *Organs of the senses*.

*Vascular System*—Heart—Arteries—Capillary vessels—  
Exhalents—Veins—Absorbents.

*Digestive Apparatus* — Mouth—Gullet—Stomach—In-  
testines.

*Glandular Organs*—Lacrymal gland — Salivary glands  
—Liver—Kidneys.

*Respiratory Organs*—Lungs.

*Organs of Generation*—In the male—In the female.

Mucons, serous, and synovial membranes—Adipose sub-  
stance.

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#### DIVISION OF THE ORGANS OF THE BODY INTO THREE GRAND CLASSES.

1. The organs which establish the relations between the animal and external objects. (*Organs of Relation*).
2. The organs which are destined to nourish the animal, (*Organs of Nutrition*).

3. The organs which are intended to perpetuate the species. (Organs of Generation.)
- 

Classification of the various tissues which compose the different organs of the body. Divisions of Anatomy.

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#### OSSEOUS SYSTEM.

Formation of bone—Structure—Marrow—Periosteum—Arrangement of the bones according to the form they present.

#### THE SKELETON.

Division into Head, Trunk and Extremities.

The Head presents, 1. The Cranium. 2. The Face.

The Trunk presents,

1. The vertebral column—Number of bones which form it—Parts presented by each vertebra—Regions of the spine—Names of the different bones.
2. The thorax—Formation of—The sternum—The ribs—Number of the ribs—Division of the ribs into true and false.
3. The pelvis—Formed of the sacrum, coccyx, and ossa innominata.

The Extremities—Four in number—The two superior or pectoral—The two inferior or pelvic.

Attitude of the human body—Vertical mesial line—Aspects of the body.

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#### THE ARTICULATIONS.

Definition of an articulation—Arrangement of the articulations into classes—Varieties or species of each class.

Different kinds of motion allowed by the moveable articulations.

*Parts entering into the formation of articulations*—Ligaments, different kinds of—Cartilages—Fibro-cartilages—Synovial membranes—Synovial fluid.



## DIVISION II.

THE ANATOMY OF THE LOWER OR PELVIC  
EXTREMITY.

Division into haunch, thigh, leg, and foot—Division of the foot into tarsus, metatarsus and toes.

Aspects of the limb.

## BONES OF THE PELVIC EXTREMITY.

\* \* \* The description of these bones should commence with that of the haunch, (os innominatum); but as this contributes to the formation of the pelvis, which is so intimately connected with the extremity, the other bones of the pelvis will be previously considered at this place.

## BONES OF THE PELVIS.

The Sacrum—The Coccyx.

*Haunch-bone*—Os innominatum, division into three portions, ilium, ischium and pubes.

*The Pelvis*—Formation—Exterior—Interior—Division into great or false, and small or true pelvis—Superior circumference—Inferior circumference—Situation and direction—Uses—Dimensions.

*Thigh-bone*—Os femoris.

*Bones of the Leg*—The Tibia—The Fibula—The Patella.

*Bones of the Foot,*

## 1. Of Tarsus.

Astragalus — Calcaneum — Scaphoid — Cuboid —  
Three Cuneiform, external, internal and middle  
—Arrangement of the tarsal bones into rows.

## 2. Of Metatarsus.

First, second, third, fourth and fifth metatarsal bones.

## 3. Of Toes.

Phalanges—first, second and third row—Sesamoid bones.

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#### ARTICULATIONS OF THE PELVIC EXTREMITY.

##### ARTICULATIONS OF THE PELVIS.

1. Sacro-vertebral—2. Sacro-coccygeal—3. Vertebro-iliac—4. Sacro-iliac—5. Pubic.

Hip-joint, or Ilio-femoral articulation.

Knee-joint, or Femoro-tibial articulation.

##### ARTICULATIONS OF THE TIBIA AND FIBULA, (FIBULO-TIBIAL.)

1. Superior fibulo-tibial—2. Inferior fibulo-tibial—3. Middle fibulo-tibial.

Ankle joint, or tibio-tarsal articulation.

##### ARTICULATIONS OF THE BONES OF THE TARSUS.

1. Articulation of the bones of the posterior row,  
Astragalus and calcaneum.
2. Articulation of the bones of the middle row,  
Scaphoid and cuboid.
3. Articulation of the posterior and middle rows with each other,
  - a. Astragalus and scaphoid—b. Calcaneum and cuboid—c. Calcaneum and scaphoid.
4. Articulations of the bones of the anterior row,  
The cuneiform bones with each other.
5. Articulations of the bones of the anterior and middle rows with each other,
  - a. External cuneiform and cuboid—b. The cuneiform bones with the scaphoid.

Articulations of the tarsal and metatarsal bones.

Articulations of the metatarsal bones with each other.

Articulations of the metatarsal bones with the phalanges.

Articulations of the phalanges.

Recapitulation of the movements of the pelvic extremity.

#### MUSCLES OF THE PELVIC EXTREMITY.

Muscles in general—Arrangement of them according to their functions—Arrangement according to the regions which they occupy.

Aponeurosis of the inferior extremity in general.

Aponeurosis of the haunch and thigh, or fascia lata—

The anatomy of crural hernia.

#### MUSCLES OF THE HAUNCH AND THIGH.

Enumeration of the regions occupied by these muscles.

External Crural Region.

Tensor vaginæ femoris.

Anterior Pelvic Region.

Psoas magnus—Psoas parvus—Iliacus internus.

Anterior Crural Region.

Sartorius—Rectus femoris—Triceps extensor cruris, comprehending, Vastus externus, Vastus internus, and Crureus.

Internal Crural Region.

Pectineus—Gracilis—Triceps adductor, including the Adductor longus, brevis and magnus.

Attachment of the preceding muscles of the haunch and thigh to the skeleton.

Posterior Pelvic Region.

Gluteus maximus—Gluteus medius—Gluteus minimus—Pyriformis—Obturator internus—Gemellus superior—Gemellus inferior—Quadratus femoris—Obturator externus.



### Posterior Crural Region.

Biceps flexor cruris—Semitendinosus—Semimembranosus.

Attachment of the muscles in the posterior pelvic and posterior crural regions to the skeleton.

Aponeuroses of the leg and foot—Annular ligaments—Plantar fascia.

### MUSCLES OF THE LEG AND FOOT.

Regions occupied by these muscles.

Posterior and Superficial Region of the Leg.

Gastrocnemius—Soleus—Plantaris—Popliteus. Poples, description of—Boundaries, &c.

Posterior and Deep Region of the Leg, and  
Plantar Region of the Foot.

1. The Muscles common to the 2d, 3d, 4th, and 5th Toes.

Flexor brevis digitorum—Flexor longus digitorum—Musculus accessorius—Lumbricales.

2. The Muscles proper to the Great Toe.

Adductor pollicis—Abductor obliquus pollicis—Abductor transversus pollicis—Flexor longus pollicis—Flexor brevis pollicis.

3. The Muscles proper to the Little Toe.

Abductor minimi digiti—Flexor brevis minimi digiti.

4. Tibialis posticus.

Arrangement of the preceding muscles of the leg and foot; 1st, according to their functions; and, 2dly, according to their regions.

The attachments of the preceding muscles of the leg and foot to the skeleton.

Anterior Region of the Leg, and Dorsal Region  
of the Foot.

Tibialis anticus—Extensor proprius pollicis—Extensor

longus digitorum—Extensor brevis digitorum—Peroneus tertius.

Peroneal Region.

Peroneus longus—Peroneus brevis.

Interosseous Region.

Plantar interossei—Dorsal interossei.

Attachments to the skeleton, of the muscles in the anterior and peroneal regions of the leg, and dorsal and interosseous regions of the foot.

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THE NERVES OF THE PELVIC EXTREMITY.

*The nerves generally*—The manner of their connexion with the spinal cord—The arrangement of the roots of the spinal nerves—The difference in the function of their roots—Their course—Ganglions—Junction of the roots.

LUMBAR NERVES.

Number—Situation—Course—Division—Arrangement of the branches.

*Lumbar Plexus.*

Formation of the Plexus—Situation.

*Branches generally* — Ilio-scrotal — Middle branch—Inguino-cutaneous — Genito-crural—Anterior crural—Obturator—Lumbo-sacral.

*Branches particularly*—Their formation, course, subdivision and distribution.

THE SACRAL NERVES.

Number—Union with spinal cord—Arrangement of the branches.

*Sacral Plexus.*

Formation—Situation—Difference from lumbar plexus—



Branches. *Internal set*, in general,—Hemorrhoidal—Vesical—Uterine—Vaginal. *External set*, generally,—Pudic—Great sciatic—Small sciatic.

*Small Sciatic*, in particular—Formation—Course—Division and Distribution.

*Great Sciatic*, particularly—How formed—Course—Relations—Separation into external and internal popliteals. *Internal Popliteal Nerve*, in particular—Branches—Posterior tibial—Plantar nerves. *External Popliteal Nerve*—Course—Division—Musculo-cutaneous—Anterior tibial.

#### VESSELS OF THE PELVIC EXTREMITY.

General description of the vessels of the Pelvic extremity—Explanation of the course of the blood from the heart along the arteries to the limb—Aorta—Common iliacs—External and internal iliacs.

General description of the veins which return the blood from the limb to the heart; division of the veins into a superficial and deep set—External and internal iliac veins—Common iliac vein—Vena cava.

Absorbents of the limb in general.

#### ARTERIES.

##### Common Iliac Artery.

Commencement—Course, &c.—Division into external and internal iliacs.

##### Internal Iliac Artery.

Origin—Course—Branches, &c.—Arrangement of the branches into an internal and external set—Internal set generally—External set in general—Gluteal artery in particular; description of the method of securing this vessel—Ischiadic artery in particular; operation of securing it described—Obturator artery in particular.

### External Iliac Artery.

Description of this vessel—Branches generally.

\* \* \* The iliac arteries will be again described with the anatomy of the trunk.

### Femoral Artery.

Commencement—Course—Termination—Relations—Branches—Description of the different operations for securing this vessel—Anastomoses of the branches of this artery, which carry on the circulation when it is tied or otherwise obstructed.

### Popliteal Artery.

Description of the poples recapitulated—Situation—Boundaries—Contents—Course of the artery, Termination—Relations—Branches—Operation of tying the artery described—Anastomoses.

### Posterior Tibial Artery.

Course—Relations—Branches—Operation of securing it described—Anastomoses.

### Anterior Tibial Artery.

Course—Relations—Branches—Operations—Anastomoses.

## VEINS.

Arrangement into a superficial and a deep set—Anterior tibial vein—Posterior tibial vein—External saphena vein—Popliteal vein—Femoral vein—Internal saphena vein—External iliac vein—Internal iliac vein—Common iliac vein.

## ABSORBENTS WITH THEIR GLANDS.

Arrangement of the absorbents into a superficial and deep set.

Arrangement of the glands.

Superficial absorbents in particular.

Deep absorbents in particular.

## DIVISION III.

THE ANATOMY OF THE SUPERIOR OR PECTORAL  
EXTREMITY.

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Division into shoulder, arm, forearm and hand.....Hand  
into carpus, metacarpus and fingers.

Aspects of the extremity.

## BONES OF THE PECTORAL EXTREMITY.

*Bones of the shoulder*.....Scapula.....Clavicle.

*Bone of the arm*.....Humerus.

*Bones of the forearm*.....Radius.....Ulna.

*Bones of the hand.*

## 1. Of Carpus.

Scaphoid ..... Semilunar ..... Cuneiform ..... Pisiform .....  
Trapezium.....Trapezoid.....Magnum.....Unciform.

## 2. Of Metacarpus.

First, second, third, fourth, and fifth metacarpal bones.

## 3. Of Fingers,

Phalanges.....First, second and third row.....Sesamoid  
bones.

## ARTICULATIONS OF THE PECTORAL EXTREMITY.

Articulations of the shoulder.

1. Sterno-clavicular.....2. Scapulo-clavicular.....3. Pro-  
per ligaments of the scapula.

Shoulder-joint, or Scapulo-humeral articulation.

Elbow-joint, or Humero-cubital articulation.

Articulations of the Radius and Ulna, (Radio-Ulnar.)

1. Superior Radio-ulnar.....2. Inferior Radio-ulnar.....
3. Middle Radio-ulnar.



Wrist-joint, or Radio-carpal articulation.

Articulations of the Bones of the Carpus.

1. Articulations of the bones of the superior row.....  
Ligaments of the pisiform bone.
2. Articulations of the bones of the inferior row.
3. Articulations of the superior and inferior rows with each other.

Articulations of the Carpal with the Metacarpal Bones.

1. The first metacarpal bone with the trapezium.
2. The four last metacarpal bones with the carpal.

Articulations of the four last metacarpal bones with each other.

Articulations of the metacarpal bones with the phalanges.

Articulations of the phalanges.

Recapitulation of the movements of the pectoral extremity.

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#### MUSCLES OF THE PECTORAL EXTREMITY.

Muscles in general.....Arrangement of them, 1. according to their functions; and, 2. according to the regions they occupy.

Aponeurosis of the pectoral extremity in general.

Pectoral aponeurosis.....Brachial aponeurosis.

Intermuscular ligaments.

#### MUSCLES OF THE THORAX CONNECTED WITH THE SHOULDER.

Anterior Thoracic Region.

Pectoralis major.....Pectoralis minor.....Subclavius.

Lateral Thoracic Region.

Serratus magnus.....Description of the axilla.

Attachments of the muscles in the anterior and lateral thoracic regions to the skeleton.

#### MUSCLES OF THE SHOULDER.

External Scapular Region.

Deltoid.

Posterior Scapular Region.

Supra-spinatus.....Infra-spinatus.....Teres minor.

Anterior Scapular Region.

Subscapularis.....Teres Major.....Portion of latissimus dorsi.

Classification of the muscles of the shoulder, and their attachments to the skeleton.

#### MUSCLES OF THE ARM.

Anterior Brachial Region.

Coraco-brachialis.....Biceps flexor cubiti.....Brachialis anticus.

Posterior Brachial Region.

Triceps extensor cubiti.

Attachments of the muscles of the arm to the skeleton.

#### MUSCLES OF THE FOREARM AND HAND.

General arrangement of the muscles of the forearm and hand; 1. according to function; 2. according to situation.

Aponeurosis of the forearm and hand.....Annular ligaments  
.....Palmar fascia.

Muscles in the 1st Class.

Anterior and ulnar regions of the forearm and middle palmar region.

*Superficial set.*

1. Pronator radii teres.....Flexor carpi radialis.....Flexor



carpi ulnaris.....Palmaris longus.....Palmaris brevis.....  
Flexor digitorum sublimis perforatus.

*Deep set.*

Flexor digitorum profundus perforans.....Lumbricales.....  
Flexor longus pollicis, (will be reconsidered with  
the muscles of the thumb.).....Pronator quadratus.

Attachments of the muscles in the 1st class to the skeleton.

Muscles in the 2d Class.

Radial and posterior regions of the forearm, and posterior regions of the hand.

*Superficial set.*

Supinator radii longus. .... Extensor carpi radialis longior.....Extensor carpi radialis brevior.....Extensor digitorum communis ..... Extensor proprius minimi digiti, (will be re-examined with the muscles of the little finger.).....Extensor carpi ulnaris.....Anconeus.

*Deep set.*

Supinator radii brevis.....Extensor indicis proprius sive indicator.....(*Muscles of the thumb.*) Extensor ossis metacarpi pollicis.....Extensor primi internodii pollicis.....Extensor secundi internodii pollicis.

Attachments of the muscles in the 2d class to the skeleton.

Muscles in the 3d Class.

External palmar region.

(*Muscles of the thumb continued.*) Abductor pollicis.....  
Adductor pollicis.....Flexor ossis metacarpi pollicis.....  
Flexor brevis pollicis.....Flexor longus pollicis, (see  
1st class, deep set.)

Attachment of 3d class to the skeleton.

Muscles in the 4th Class.

Internal palmar region.

Palmaris brevis, (see 1st class, superficial set.).....(*Muscles proper to little finger.*) Flexor brevis minimi

digiti.....(Extensor proprius minimi digiti; see 2d class, superficial set.).....Adductor minimi digiti.....  
Abductor minimi digiti.

#### Muscles in the 5th Class.

Interosseous region.

Dorsal Interossei.....Palmar interossei.

#### NERVES OF THE PECTORAL EXTREMITY.

General description of the several sources whence the nerves of the limb proceed.....Cervical nerves generally  
.....Dorsal nerves generally.....Connection of cervical and dorsal nerves with the spinal cord.....Cervical plexus in general.....Brachial plexus in general.

Branches of the cervical plexus sent to the pectoral extremity.

#### BRACHIAL PLEXUS.

Formation of.....Situation.....Arrangement of the trunks entering into its composition.....Course, and appearance of the plexus.

Branches generally.....Arrangement.....Division into sets  
.....Origin, course and distribution.

Branches of the dorsal nerves sent to the pectoral extremity.

First, second, and third dorsal nerves.

#### VESSELS OF THE PECTORAL EXTREMITY.

The vessels of the pectoral extremity in general.

View of the course of the blood from the heart to the pectoral extremity ..... Aorta ..... Arteria innominata .....  
Right and left subclavian arteries.

General description of the veins which return the blood  
.....Division into a superficial and deep set.....Subclavian

vein.....Venæ innominatæ.....Vena cava superior.....Absorbents of the limb in general.

#### ARTERIES.

##### Axillary Artery.

Commencement.....Course.....Termination.....Relations.....Branches.....Description of the operations for securing it.....Collateral circulation.

##### Brachial Artery.

Course.....Termination.....Relations.....Branches.....Operations described.....Anastomoses.

##### Ulnar Artery.

Course.....Relations.....Branches.....Operations.....Anastomoses.....Interosseous arteries.

##### Radial Artery.

Course.....Relations.....Branches.....Description of the operations performed upon it.....Anastomoses.

#### VEINS.

##### Arrangement into a Superficial and Deep Set.

##### Superficial set.

Superficial radial.....Cephalic.....Salvatella.....Posterior superficial ulnar.....Anterior superficial ulnar.....Basilic.....Median.....Median cephalic.....Median basilic.

##### Deep set.

Deep radial.....Deep ulnar.....Brachial.....Axillary.

#### ABSORBENTS.

##### Arrangement into a Superficial and Deep Set.

##### Arrangement of the glands.

Superficial absorbents in particular.....Deep absorbents in particular.



## DIVISION IV.

## THE ANATOMY OF THE HEAD AND NECK.

## BONES OF THE HEAD.

Division into Cranium and Face.

Bones of the cranium generally.....Structure of the bones of the cranium.....Bones of the face generally.

Bones of the Cranium particularly.

Sphenoid.....Ethmoid.....Frontal.....Occipital.....Temporal.....Parietal.....Ossa Wormiana.

External surface of the cranium.....Regions, superior, inferior, lateral or temporal.....Internal surface of the cranium.....Superior region or vault.....Inferior region or base.....Anterior, middle, and posterior fossæ—Foramina.

Bones of the Face particularly.

Superior maxillary.....Nasal.....Lacrymal.....Palate.....Vomer.....Inferior turbinated.....Malar.....Inferior maxillary.

Regions of the face.....Nasal fossæ.....Orbits.....Mouth.....Zygomatic fossæ.....Spheno-maxillary fossæ.

## THE TEETH.

Description of the process of mastication.....Parts exhibited by each tooth.....Arrangement, uses, and number of the teeth.....Structure.....Chemical composition.....Organization.....Permanent.....Temporary.....Formation.

## ARTICULATIONS OF THE HEAD.

The sutures.....Articulations between teeth and jaws.....

Articulation of the lower jaw (Temporo-maxillary).

Articulation of the head with the vertebral column.

1. The occipital bone with the atlas.....
2. The occipital bone with the axis.

Articulation of the atlas with the axis.

Movements of the head upon the atlas..... Movements of the head upon the axis through the medium of the atlas.

#### THE ORGANS OF THE SENSES.

General explanation of the functions of the organs of the senses.

#### ORGAN OF SIGHT.

Introductory observations to the anatomy of the eye.....

General remarks upon optics.

#### Eye Ball.

Shape..... Diameters..... Axis..... Sclerotic membrane ..... Cornea..... Ciliary circle..... Iris..... Choroid membrane..... Ciliary processes ..... Retina ..... Optic nerve generally ..... Aqueous humour and membrane ..... Crystalline body and membrane..... Vitreous humour and membrane.

#### Protecting Apparatus of the Eye.

Supercilia ..... Palpebræ ..... Ciliæ..... Tunica conjunctiva..... Plica semilunaris..... Caruncula lacrymalis..... Glandulæ Meibomii.

(Lacrymal apparatus) Lacrymal gland and ducts ..... Puncta lacrymalia ..... Canaliculi lacrymales ..... Lacrymal sac..... Nasal duct.

#### ORGAN OF HEARING.

Introductory observations to the anatomy of the ear.....

Explanation of sound.

Division of the organ of hearing into external, middle, and internal.



## External Ear.

Auricle ~~~ Cartilage ~~~ Elevations ~~~ Depressions ~~~ Ligaments.

Meatus auditorius externus ~~~ Extent ~~~ Direction ~~~ Parts entering into the formation of, osseous portion, cartilaginous portion, fibrous, integuments, hairs, ceruminous follicles.

## Middle Ear.

Tympanum ~~~ Roof ~~~ Floor ~~~ External, internal, anterior and posterior walls ~~~ Features of each of these parts.

Bones of the tympanum.

Maleus ~~~ Incus ~~~ Orbiculare ~~~ Stapes.

Muscles of the tympanum.

Tensor tympani ~~~ Laxator tympani ~~~ Stapedius.

Mucous membrane of the middle ear.

## Internal Ear.

Labyrinth, division into vestibule, cochlea, and semicircular canals.

Vestibule ~~~ Situation ~~~ Apertures of communication ~~~ Aqueduct.

Semicircular canals ~~~ Superior vertical ~~~ Posterior vertical ~~~ Horizontal.

Cochlea ~~~ Axis ~~~ Spiral tube ~~~ Lamina spiralis ~~~ Scalæ, external (vestibular) ~~~ Internal (tympanic) ~~~ Aqueduct.

Membranes lining internal ear ~~~ Fluids of the internal ear ~~~ Acoustic nerve in general.

## ORGAN OF SMELL.

Introductory observations to the anatomy of the nose.

## Nasal Fossæ.

Floor ~~~ Roof ~~~ Inner wall (Septum) ~~~ Outer wall ~~~ Superior, middle, and inferior meatus ~~~ Sinuses and cells communicating with the nose ~~~ Cartilages of the nose

- .....The olfactory membrane (Schneiderian or pituitary)
- .....The olfactory nerve in general.

#### ORGAN OF TASTE.

Introductory observations to the anatomy of the tongue.

##### Tongue.

- General conformation.....Base.....Apex.....Superior surface (Dorsum).....Inferior surface.....Margins.....Organization
- .....Papillæ.....Foramen cæcum of Morgagni.....Nerves of the tongue in general.

#### ORGAN OF TOUCH.

Introductory observations to the anatomy of the skin.

##### Skin.

- General description of the skin.....Differences in the colour of the skin in the human species.....Colour in the Caucasian, Mongolian, American, Malay, and Ethiopian.....Layers of the skin.....Dermis.....Epidermis.....Rete mucosum.....Hairs and nails.

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#### THE MOUTH AND ITS APPENDAGES.

- General considerations of the different functions performed by the mouth.....Boundaries.....Apertures and mucous membrane in general.

##### Anterior Wall and Aperture of the Mouth.

- Lips.....Conformation.....Superior.....Inferior.....Commissure or angle.....Organization.

##### Posterior Wall and Aperture of the Mouth.

- Velum palati.....Conformation.....Uvula.....Pillars.....Organization.....Tonsils (Amygdalæ).

##### Lateral Wall of the Mouth.

- Cheeks.....Conformation.....Organization.

##### Superior Wall.

- The palate.....Conformation and organization.

Inferior Wall.

The tongue. (See Organ of Taste.)

Mucous membrane of the mouth in particular.

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#### THE PHARYNX.

Considered generally with regard to its several uses.

Situation. Shape. Apertures. Organization.

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#### THE APPARATUS OF THE VOICE.

Explanation of the production of the voice.

The Larynx and Os Hyoides.

General considerations of the manner in which the larynx accomplishes its function.

Hyoid Bone.

Articulation of the hyoid bone, or stylo-hyoid articulation.

Parts entering into the formation of the larynx.

Cartilages of the Larynx.

Thyroid. Cricoid. Arytenoid. Epiglottis.

Articulations of the Larynx.

Thyro-hyoid. Crico-thyroid. Crico-arytenoid. Thyro-arytenoid. Thyro-epiglottidean.

Movements of the various cartilages upon each other, and of the larynx collectively.

Uses of these various movements in the production and modification of the voice.

Muscles of the Larynx.

Crico-thyroidei. Crico-arytenoidei postici. Crico-arytenoidei laterales. Thyro-arytenoidei. Arytenoideus.

Glands of the Larynx.

Epiglottidean. Arytenoid. Thyroid body.

Mucous Membrane of the Larynx.

Course of. Epiglottidean folds. Aryteno-epiglottidean folds. False vocal chords. Ventricles.



## MUSCLES OF THE HEAD AND NECK.

General remarks on the arrangement of the muscles of the head and neck.

## MUSCLES OF THE CRANIUM.

## Epicranial Region.

Epicranial aponeurosis.....Occipitalis.....Frontalis.

## Auricular Region.

*Muscles connected with the Organ of Hearing.*

(Muscles of the Auricle.)

Superior auris (Attollens auriculam) ..... Anterior auris  
(Attrahens auriculam) ..... Posterior auris (Retrahens  
auriculam).....Helicis major.....Helicis minor.....Tragicus  
.....Anti-tragicus.....Transversus auriculæ.

## MUSCLES OF THE FACE.

*Muscles connected with the Organ of Sight.*

## Palpebral Region.

Muscles of the Protecting Apparatus.

Orbicularis palpebrarum.....Corrugator supercilii.....Leva-  
tor palpebræ superioris.....Lacrymalis.

## Ocular Region.

Muscles of the Eye-ball.

Rectus superior (Levator oculi).....Rectus inferior (De-  
pressor oculi).....Rectus externus (Abductor oculi).....  
Rectus internus (Adductor oculi).....Obliquus oculi su-  
perior (Trochlearis).....Obliquus inferior oculi.

## Muscles of the Nose.

Pyramidalis nasi.....Triangularis nasi.

## Muscles of the Mouth.

1. *Common to the Lips*, Orbicularis oris. 2. *Upper Lip*,  
Levator labii superioris alæque nasi.....Depressor labii  
superioris alæque nasi. 3. *Angle*, Zygomaticus major.....

Zygomaticus minor.....Levator anguli oris—Depressor anguli oris. 4. *Lower Lip*, Depressor labii inferioris .....Levator labii inferioris.

### Muscles of the Cheek.

Buccinator.

### Platysma Myoides.

Although the greater part of this muscle is situated in the neck, and it is consequently, for the most part, classed with the muscles in that region, it will be considered here, its principal operation being on the face.

Muscles which move the Inferior Maxilla, and are employed in the Mastication of the Food.

Masseter.....Temporal.....Pterygoideus externus.....Pterygoideus internus .....Digastricus .....Mylo-hyoideus .....Genio-hyoideus.

### INSALIVATION OF THE FOOD.

#### Salivary Glands.

Parotid gland and duct (*Steno*).....Submaxillary gland and duct (*Wharton*).....Sublingual gland and duct.

### MUSCLES OF THE NECK.

Arrangement of the muscles of the neck in general.

Muscles in particular.

Sterno-cleido-mastoideus ..... Stylo-hyoideus.....Omo-hyoideus.....Sterno-hyoideus .....Sterno-thyroideus.....Thyro-hyoideus.

#### Superficial and deep Fascia of the Neck.

Division of the neck into triangles; and classification of the anterior arrangement of the muscles of the neck.

#### Muscles of the Tongue.

Stylo-glossus.....Hyo-glossus.....Genio-hyo-glossus .....Lingualis.



### Muscles of the Pharynx and Palate.

#### 1. Pharynx.

Constrictor inferior, medius, et superior.....Stylo-pharyngeus.

#### 2. Palate.

Palato-glossus ..... Palato-pharyngeus ..... Levator uvulæ  
.....Levator palati .....Tensor palati.

### Deep Muscles of the Neck.

Rectus capitis anticus major.....Rectus capitis anticus minor.....Rectus capitis lateralis.....Longus colli.....Scalenus anticus.....Scalenus posticus.

### NERVOUS SYSTEM.

#### General Description of the Nervous System.

Division into the nervous system of nutrition or organic life, (*Ganglionic system*) ; and the nervous system of relation or animal life. The nervous system of relation distinguished first into nerves ; and, secondly, the grand centre with which these are connected, the Cerebro-spinal Axis or brain, and spinal marrow. Arrangement of the nerves into three classes, viz. those of Sensation, Voluntary Motion, and Respiration.

#### THE CEREBRO-SPINAL AXIS.

Division according to situation into encephalon, and medulla spinalis.

Division according to the appearance of its different masses into four portions, Cerebrum, Cerebellum, Mesocephalon, and Medulla Spinalis ..... Separation into two halves, right and left.....Structure.....Membranes generally, Dura Mater, Pia Mater, Arachnoid. Vessels generally, Internal carotid and vertebral arteries ; Sinuses and Jugular veins.

#### The Medulla Spinalis.

Situation ..... Conformation, swellings, grooves, &c. ....

Organization, cineritious and medullary matter ~~~  
 Medulla oblongata; conformation, corpora pyrami-  
 dalia, corpora olivaria, corpora restiformia, calamus  
 scriptorius ~~~ Organization.

#### The Cerebellum.

Situation ~~~ Conformation, vermiform processes, &c. ~~~  
 Diverging fibres generally ~~~ Converging fibres gene-  
 rally ~~~ Fourth ventricle. ~~~ Valve of Vieussens.  
 Organization ~~~ Diverging fibres particularly, Corpora  
 restiformia ~~~ Corpus dentatum ~~~ Converging fibres  
 particularly, Crura cerebelli, processus cerebelli ad  
 testes ~~~ Arbor vitæ.

#### The Mesocephalon.

Situation ~~~ Shape ~~~ Surfaces ~~~ Margins ~~~ Organization.

#### The Cerebrum.

Situation ~~~ External conformation ~~~ Superior surface  
 ~~~ Inferior surface. ~~~ Diverging fibres ~~~ Internal con-  
 formation ~~~ Converging fibres ~~~ Commissura magna  
 ~~~ Lateral ventricles ~~~ Septum lucidum ~~~ Fifth ven-  
 tricle ~~~ Hippocampi ~~~ Fornix ~~~ Tela choroidea ~~~  
 Choroid plexuses ~~~ Corpora striata ~~~ Teniæ semicir-  
 culares ~~~ Optic thalami—Pineal gland ~~~ Third ven-  
 tricle ~~~ Tubercula quadrigemina.

Recapitulation of the arrangement of the medullary mat-  
 ter of the cerebro-spinal axis.

#### Dura Mater and Theca Vertebralis.

Processes of the dura matter ~~~ Continuity of it with the  
 periosteum investing external surface of skull, also  
 with the sclerotic coat of the eye.

#### Sinuses.

Torcular Herophili ~~~ Superior longitudinal. Fourth  
 or straight ~~~ Inferior longitudinal ~~~ Vein of Galen  
 ~~~ Occipital ~~~ Lateral ~~~ Superior and inferior petro-  
 sal ~~~ Transverse ~~~ Cavernous ~~~ Circular of Ridley.

## Pia Mater.

External and internal.

Arachnoid membrane.....Ligamentum dentatum.....Glandulæ Pacchioni.

## THE NERVES OF THE CEREBRO-SPINAL AXIS.

## Nerves in general.

Structure.....Attachment.....Anastomosis.....Plexus.....Ganglion.....Arrangement according to function.....Arrangement according to situation.

## Encephalic Nerves in general.

1st, Olfactory ..... 2d, Optic ..... 3d, Motor oculi ..... 4th, Trochleator..... 5th, Trifacial..... 6th, Abducens..... 7th, Facial ..... 8th, Auditory..... 9th, Glosso-pharyngeal..... 10th, Pneumo-gastric ..... 11th, Spinal-accessory ..... 12th, Hypoglossal..... 13th, Suboccipital.

## Spinal nerves in general.

Roots.....Ganglion.....Union of Roots.....Division of nerve. Arrangement into Cervical ..... Dorsal ..... Lumbar..... Sacral.....Cervical plexus.....Brachial plexus.....Lumbar plexus.....Sacral plexus.

## THE NERVES OF THE HEAD AND NECK IN PARTICULAR.

## Encephalic Nerves.

1. Olfactory.....Origin.....Course ..... Bulbus olfactorius..... Branches internal, external and middle.
2. Optic.....Origin ..... Course ..... Commissure.....Termination.
3. Motor oculi ..... Origin ..... Course ..... Division ..... Branches.....Distribution.
4. Trochleator.....Origin.....Course.....Termination.
5. Abducens.....Origin.....Course.....Distribution.
6. Trifacial.....Origin.....Two portions, sensific and motific.....Course.....Ganglion of Gasser.....Nerves that proceed from ganglion.



1. Ophthalmic.  
Course.....Branches of, Lacrymal.....Frontal, supra-trochlear.....Nasal, infra-trochlear.
2. Superior Maxillary.  
Course.....Branches of, Orbital.....Posterior dental  
.....Anterior dental.....Infra-orbital.
3. Inferior Maxillary.  
Formation, sensific portion, motific portion .....  
Course.....Division into two trunks, superior and inferior.....Branches of superior, Deep temporal  
.....Masseteric ..... Buccal ..... Pterygoid.....Branches of inferior, Lingual ..... Inferior dental.....Mylohyoid.....Superficial temporal.
7. Facial.....Origin.....Course.....Branches of, .....to tensor tympani muscle, to stapedeus muscle.....Posterior auricular ..... Stylo-hyoid.....Submastoid. Division into two trunks, Temporo-facial.....Cervico-facial. Branches of temporo-facial, Temporal ..... Malar ..... Buccal. Branches of cervico-facial, Supra-maxillary.....Infra-maxillary.....Cervical.
8. Auditory.....Origin.....Course.....Division into two portions.....1. Anterior for cochlea.....2. Posterior for vestibule and semicircular canals ..... Separation of the last into three branches, viz. Great, Small and Middle.
9. Glosso-pharyngeal.....Origin.....Course.....Branches.....Distribution.
10. Pneumo-gastric.....Origin ..... Course.....Distribution generally.....Division into three portions, Cervical, Thoracic and Abdominal.
11. Spinal accessory.....Origin.....Course and distribution.
12. Hypo-glossal.....Origin.....Course.....Branches, &c.
13. Sub-occipital. .... Roots, anterior and posterior.....



Ganglion.....Union of the roots.....Trunk, its division,  
Anterior branch.....Posterior branch.

*Cervical Nerves.*

Number.....Roots, anterior and posterior.....Ganglion.....  
Union of the roots.....Trunk, its division.....Posterior  
branches.....Anterior branches.

*Cervical Plexus.*

Formation.....Situation.....Branches divided into two sets,  
viz. Ascending and descending.....Division of the de-  
scending set into a superficial and deep series.

GANGLIONIC SYSTEM OF NERVES OF THE HEAD AND NECK.

Ganglions and ganglionic nerves in general. Structure,  
&c.

Arrangement of the ganglions of the head and neck.

Ganglions of the Head and their Branches.

Ophthalmic ganglion.....Cavernous ganglion.....Spheno-  
palatine ganglion.....Naso-palatine ganglion.....Sub-  
maxillary ganglion.

Ganglions of the Neck and their Branches.

Superior cervical ganglion.....Middle cervical ganglion  
.....Inferior cervical ganglion.

VESSELS OF THE HEAD AND NECK.

General description of the vessels of the head and neck.

Description of the arteries which convey the blood  
from the heart to the head and neck.....Aorta, Ar-  
teria innominata.....Left carotid, Left subclavian. Ar-  
teria innominata, its division into right carotid and  
right subclavian.....Description of the veins which  
return the blood from the head and neck, External  
and internal jugular veins.....Subclavian veins.....Venæ  
innominatæ.....Superior vena cava.....Absorbents ge-  
nerally.

## ARTERIES.

## Arteria Innominata.

Origin.....Course.....Division into right subclavian and right carotid.....Relations.....Description of the operation for tying the vessel.

## Carotid Artery.

Course.....Division into external and internal carotids.....Relations.....Operation of tying it described.

## External Carotid Artery.

Course.....Relations.....Branches generally.....Arrangement of the branches.

Operation of tying this vessel and its most important branches.

Branches particularly.

Superior thyroid.....Facial.....Transverse facial.....Temporal.....Sterno-mastoid.....Occipital.....Posterior auricular.....Lingual.....Internal maxillary. Ascending Pharyngeal.

## Subclavian Arteries.

Difference between right and left subclavian arteries.

Course.....Termination.....Relations.....Branches generally.

## Branches particularly.

(*Thyroid Axis*,) Inferior thyroid.....Ascending cervical.....Transverse cervical.....Supra-scapular.....Deep cervical.....Superior intercostal.....Internal mammary.

Description of the operation of securing the Subclavian Artery, and the anastomosis which carries on the circulation after being tied.

Explanation of the various anastomoses, which continue the circulation, after securing, 1st, The arteria innominata; 2d, The common; and, 3d, The external carotid arteries.

*Arteries of the Brain.*

## Vertebral Artery.

Course.....Branches.....Basilar artery.....Course.....Termination and branches.

## Internal Carotid Artery.

Course.....Relations.....Branches generally.

Branches particularly. Posterior communicating.....Anterior cerebral.....(Anterior communicating).....Middle cerebral. The Circle of Willis.

Ophthalmic artery. Course.....Relations and branches.

## VEINS.

Description of the veins which by their union form the external jugular.

Superficial temporal vein.....Internal maxillary vein.....Posterior auricular vein.

Description of the veins which enter into the formation of the internal jugular.

Ophthalmic vein.....Lateral sinus.....Facial vein.....Lingual vein.....Pharyngeal vein.....Superior thyroid vein.....Occipital vein.....Middle thyroid vein.

The subclavian veins.....Venæ innominatæ, right and left.....Vena cava superior in general.

## ABSORBENTS.

Arrangement into a superficial and deep set.

Description of the glands in particular.

Description of the vessels in particular.....Superficial set, Deep set.



## DIVISION V.

## THE ANATOMY OF THE TRUNK.

## BONES OF THE TRUNK.

## The Vertebral Column.

Description of the several parts of the vertebræ in common.....Division of the column into regions.....Characters of the vertebræ in each region; 1. Cervical vertebræ. 2. Dorsal vertebræ. 3. Lumbar vertebræ.....Peculiarities of some of the vertebræ in each region.....Atlas.....Axis.....Seventh cervical vertebra.....First dorsal vertebra.....Tenth dorsal vertebra.....Eleventh and twelfth dorsal vertebræ.

The column generally.....Curvatures, &c.

## The Thorax.

The sternum.....The ensiform or Xiphoid cartilage.....The ribs.....Number.....Division into true and false.....Parts of the ribs in common.....Particular characters of certain of the ribs.....First, second, eleventh and twelfth ribs.....The costal cartilages.....The thorax in general.....Formation.....Shape.....Summit.....Base.....Direction and dimensions.

## ARTICULATIONS OF THE TRUNK.

## Articulations of the Vertebral Column.

1. Articulations of the bodies. 2. Articulations of the articular processes. 3. Articulations of the spinous processes. 4. Articulations of the transverse processes. 5. Articulations of the arches.

Movements of the vertebral column.

## Articulations of the Thorax.

### Articulations of the ribs.

1. Articulations of the heads of the ribs with the bodies of the vertebræ. 2. Articulations of the tubercles of the ribs with the transverse processes of the vertebræ. 3. Articulations of the necks of the ribs with the transverse processes of the vertebræ. 4. Articulations of the ribs with their cartilages. 5. Articulation of the twelfth rib with the lumbar vertebræ.

Articulations of the sternal costal cartilages with the sternum and Xiphoid cartilage.

Articulations of the abdominal costal cartilages.

Movements of the thorax.

## MUSCLES OF THE TRUNK.

### General Considerations on the Arrangement of the Muscles of the Trunk.

#### Muscles of the Back.

Arrangement of the muscles of the back into layers.....

*1st Layer*, Trapezius, cervical aponeurosis.....Lumbar aponeurosis generally.....*Latissimus dorsi*.....*2d Layer*, Levator anguli scapulæ.....*Rhomboideus major et minor*.....*3d Layer*, Serratus posticus superior.....Serratus posticus inferior? ..... Vertebral aponeurosis ..... *4th Layer*, Splenius capitis.....Splenius colli.....*5th Layer*, Sacro-lumbalis ..... Musculi accessorii and cervicalis ascendens.....Longissimus dorsi.....Transversalis colli .....Complexus major ..... Complexus minor.....Spinalis (*spinalis dorsi, semispinalis dorsi, semispinalis colli*).....*6th Layer*, Obliquus capitis inferior.....Obliquus capitis superior.....Rectus capitis posticus major.....Rectus capitis posticus minor ..... Multifidus spinæ ..... Interspinales ..... Intertransversales ..... Levatores costarum ..... Quadratus lumborum.....Lumbar Aponeurosis particularly.

### Muscles of the Abdomen.

Arrangement of the muscles of the abdomen generally

~~~~ Fascia superficialis ~~~~ Abdominal aponeurosis ~~~~  
 Rectus abdominis ~~~~ Pyramidalis ~~~~ Obliquus abdomi-  
 nis externus ~~~~ Obliquus abdominis internus ~~~~ Trans-  
 versalis abdominis ~~~~ Fascia transversalis.

The anatomy of inguinal hernia.

### Muscles of the Thorax.

Intercostales externi ~~~~ Intercostales interni ~~~~ Dia-  
 phragm ~~~~ Triangularis sterni.

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### THE THORAX.

Contents of the thorax generally ~~~~ Boundaries.

#### The Pleuræ.

General arrangement ~~~~ Course of ~~~~ Names applied to  
 the different portions of ~~~~ The mediastinum ~~~~ Cavi-  
 ties of the mediastinum, with their contents.

#### The Thymus Gland.

Situation ~~~~ Structure ~~~~ Developement ~~~~ Supposed uses.

### ORGAN OF CIRCULATION.

#### The Heart and its Membranes.

The pericardium.

Disposition in general ~~~~ Fibrous portion ~~~~ Serous  
 portion.

#### The Heart.

Situation ~~~~ External conformation ~~~~ View of the circu-  
 lation, and action of the heart in general ~~~~ Cavities  
 of the heart ~~~~ Right auricle ~~~~ Venæ cavæ generally ~~~~  
 Right ventricle ~~~~ Pulmonary artery generally ~~~~ Left  
 auricle ~~~~ Pulmonary veins generally ~~~~ Left ventricle  
 ~~~~ Aorta generally ~~~~ Organization of the heart ~~~~ Ex-  
 ternal membrane ~~~~ Muscular tissue ~~~~ Internal mem-  
 brane; 1st, of right side; 2d, of left side.



## ORGANS OF RESPIRATION.

## The Lungs.

Number.....Situation ..... Conformation.....Organization of the lungs.

## The Trachea and Bronchial Tubes.

The Trachea.....General Conformation.....Course.....Relations.....Division into the bronchial tubes.

## The Bronchial Tubes.

Difference between right and left ..... Course ..... Relations.....Divisions.....Termination.

Organization of the trachea and bronchial tubes.

## The Pulmonary Circulation.

*Pulmonary artery* ..... Origin ..... Course ..... Division ..... Ductus arteriosus.....Relations.....Branches, &c.

Pulmonary veins ..... Commencement..... Course ..... Relations.

Description of the changes effected on the blood in the lungs by respiration.

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 THE ABDOMEN.

Situation.....Shape.....Boundaries ..... Enumeration of the organs contained in it.....Division into regions.

## ORGANS OF DIGESTION.

General description of the digestive apparatus.....The course of the food from the mouth to the anus, and the changes effected on it in its passage. Changes in the mouth.....Mixture of the salivary fluid.....Changes in the stomach.....Changes in the intestines.....Mixture of the biliary and pancreatic fluids.

Division of the digestive organs into the chylo-poietic and assistant chylo-poietic.....Enumeration of the objects comprehended under each of those heads.

Tunics of the alimentary canal generally.

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The Œsophagus.

Course.....Division into cervical, thoracic and abdominal portions.....Relations.....Organization.

The Stomach.

Situation.....Relations.....Conformation.....Surfaces.....Margins.....Extremities.....Organization.....Functions.

The Small Intestine.

Extent of ..... Length ..... Division into three portions .....  
The duodenum.....The jejunum.....The ileum.

The Duodenum.

Situation ..... Course ..... Relations ..... Division into three portions.....Curvatures.....Organization.

The Jejunum.

Situation.....Relations.....Course and organization.

The Ileum.

Situation.....Relations.....Extent.....Organization ..... Function of the small intestine.

The Large Intestine.

Commencement ..... Termination ..... Length.....Difference from small intestine.....Division into three portions.....  
The cœcum.....The colon.....The rectum.

The Cœcum.

Situation.....Relations ..... Conformation.....Appendix vermiformis.....Organization.....Ileo-cœcal valve.

The Colon.

Situation ..... Course.....Ascending portion ..... Transverse arch ..... Descending portion and sigmoid flexure .....  
Relations.....Organization.

The Rectum.

Situation.....Extent.....Course.....Relations, in male, in female.....Organization.

Function of the large intestine.

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### The Pancreas.

Situation ~~~ Shape ~~~ Relations ~~~ Structure ~~~ Duct ~~~  
Function ~~~ Pancreatic fluid.

### The Liver.

Situation ~~~ Relations ~~~ Ligaments ~~~ Conformation,  
surfaces, lobes, fissures, borders, extremities, &c.  
Organization, vessels in general, parenchyma, peri-  
toneal tunic, capsule of Glisson.

Ducts ~~~ Hepatic ~~~ Cystic ~~~ Communis choledochus.  
Gall bladder ~~~ Conformation ~~~ Organization, &c.  
Functions of the liver, bile, &c.

### The Spleen.

Situation ~~~ Relations ~~~ Conformation ~~~ Organization.

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### The Gastro-pulmonary Mucous Membrane.

Description of the course of this extensive membrane,  
the appearance it presents in the various regions, and  
the different productions which it forms, recapitula-  
ted.

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### THE URINARY ORGANS.

General description of the urinary organs ~~~ Enumera-  
tion of the different parts comprehended under this  
head ~~~ View of the course of the urine ~~~ Its secre-  
tion, course, and expulsion.

### The Supra-renal Capsules.

Situation ~~~ Relations ~~~ Structure.

### The Kidneys.

Number ~~~ Situation ~~~ Relations ~~~ Conformation ~~~ Or-  
ganization, vessels in general, cortical substance, tu-  
bular substance.

Calices ~~~ Infundibula ~~~ Pelvis.

Ureter, its course, relations, and termination.



### The Bladder.

Situation.....Varieties of form, in adult male and female, and child.....Relations.....The external surface, its regions, &c.....The internal surface, its folds, trigon, uvula, &c.....Organization.

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### THE ORGANS OF GENERATION.

The organs of generation generally.....Difference of the sexes.....Organs of generation in man.....Organs of generation in woman.

#### *Organs of Generation in the Male.*

##### The Testicles.

General description of.....Envelopes of (*Scrotum*).....Integuments.....Dartos .....Cremaster.....Fibrous tunic.....Serosous coat. Particular description of.....Conformation.....Organization.....Tunica albuginea.....Tubuli semiferi.....Epididymis.....Vas deferens.....Spermatic cord.....Vesiculæ seminales .....Ejaculatory ducts .....Prostate gland.....Glands of Cowper.

##### The Penis.

General description of.....Organization.....Corpus cavernosum.....Corpus spongiosum.....Urethra, its length.....Course .....Prostatic portion, membranous portion, spongy portion.....Mucous membrane.....Caput gallinaginis.....Integuments of the penis.....Prepuce, &c.

#### *Organs of Generation in the Female.*

Arrangement of the generative organs.

##### The Vulva.

Boundaries .....Mons Veneris.....Labia pudendi .....Fourchette .....Fossa navicularis .....Clitoris .....Nymphæ.....Vestibule.....Meatus urinarius.....Hymen.....Carunculæ myrtiformes.

##### The Vagina.

Extent.....Direction.....Relations.....Organization.

### The Uterus.

Situation ~~~ Form ~~~ Relations ~~~ Body ~~~ Neck ~~~ Mouth  
 ~~~ Cavity ~~~ Organization ~~~ Fallopian tubes, uterine  
 extremity, fimbriated extremity ~~~ Broad ligaments ~~~  
 Round ligaments.

### The Ovaries.

Situation ~~~ Ligament ~~~ Form ~~~ Organization, fibrous  
 tunic, vesiculæ Graafianæ, &c.

### The Mammæ.

Situation ~~~ Form ~~~ Areola ~~~ Nipple ~~~ Organization ~~~  
 Glandular structure ~~~ Lactiferous ducts.

### *The Fetus and its Appendages.*

Impregnation ~~~ Developement of the ovum ~~~ Coverings  
 of the fetus, Decidua ~~~ Chorion ~~~ Amnios ~~~ Nutrition  
 of the fetus ~~~ Vesicula alba ~~~ Placenta and umbilical  
 cord.

### MUSCLES OF THE PERINEUM CONNECTED WITH THE ORGANS OF GENERATION, &c.

Description of the perineum ~~~ Boundaries ~~~ Division  
 into regions ~~~ Superficial and deep fascia.

#### Anal Region.

Sphincter ani ~~~ Levator ani ~~~ Coccygeus.

#### Genital Region.

#### 1. In the male.

Transversus perinæi ~~~ Accelerator urinæ ~~~ Erector  
 penis.

#### 2. In the female.

Transversus perinæi ~~~ Constrictor vaginæ ~~~ Erector  
 clitoridis.

### THE PERITONEUM.

General description of the membrane ~~~ Folds or pro-  
 ductions of the peritoneum ~~~ Ligaments of the liver

..... Omenta ..... Mesentery ..... Meso-colon ..... Meso-rectum.....The course of the membrane.....Marsupium.....  
Foramen of Winslow.

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#### VESSELS OF THE TRUNK.

General description of the vessels of the trunk.

#### ARTERIES.

##### The Aorta.

General description ..... Origin ..... Course.....Termination  
in the two iliacs.....Division into thoracic and abdominal.

##### Thoracic Aorta.

Course.....Relations.....Branches.

##### Abdominal Aorta.

Course ..... Relations ..... Branches generally ..... Branches particularly.

Coeliac axis.....Gastric ..... Hepatic.....Splenic. Superior  
mesenteric ..... Inferior mesenteric.....Capsular.....Renal  
.....Spermatic.....Phrenic.....Lumbar.....Middle sacral.

Description of the operation for securing the abdominal Aorta.

##### Common Iliac Arteries.

Course .....Division into internal and external iliacs.....  
Relations.....Operation for securing these vessels described.

##### Internal Iliac.

Course.....Relations.....Arrangement of the branches into  
an internal and external set.

Internal branches particularly.....External branches particularly.

Description of the mode of securing this vessel.

##### External Iliac.

Course.....Relations.....Branches.....Operation.

Explanation of the various anastomoses which carry on



the circulation after securing the abdominal aorta, the common, internal and external iliac arteries.

#### VEINS.

General view of the veins of the trunk ~~~ Veins of the trunk particularly.

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Vena Cava Superior.

Formation ~~~ Venæ innominatæ ~~~ Course ~~~ Relations.

Vena Portæ.

Formation ~~~ Inferior mesenteric ~~~ Splenic ~~~ Superior mesenteric ~~~ Gastric ~~~ Course ~~~ Relations ~~~ Branches in the Liver ~~~ Termination.

Vena Cava Inferior.

Formation ~~~ External iliac ~~~ Internal iliac ~~~ Renal ~~~ Spermatic ~~~ Venæ cavæ hepaticæ ~~~ Course, &c.

Vena Azygos.

Commencement ~~~ Course ~~~ Relations, branches which it receives ~~~ Azygos minor ~~~ Termination.

#### ABSORBENTS.

Arrangement of the glands ~~~ Description of the absorbent vessels ~~~ Thoracic duct.

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#### THE ORGANS OF CIRCULATION OF THE FETUS.

Umbilical vein ~~~ Ductus venosus ~~~ Foramen ovale ~~~ Ductus arteriosus ~~~ Umbilical arteries.

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#### THE NERVES OF THE TRUNK.

The Nerves connected with the Respiratory System.

Glosso-pharyngeal ~~~ Pneumo-gastric ~~~ Spinal accessory ~~~ Phrenic ~~~ Posterior thoracic ~~~ The dorsal nerves.

Lumbar and sacral plexus recapitulated.

Ganglionic system of nerves of the trunk.....Ganglions  
of the thorax and their branches.

Cardiac ganglion.....Coronary plexus.....Dorsal ganglions  
.....Great splanchnic nerve.....Small splanchnic nerve.

Ganglions of the abdomen and their branches.....Semilu-  
nar ganglions.....Solar plexus with its subdivisions.....  
Inferior mesenteric plexus.....Lumbar ganglions.....Sa-  
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